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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,384	05/21/2001	Kiyoshi Motegi	P-25.096 USA	7923

7590 10/26/2004

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EXAMINER

KIM, PETER B

ART UNIT PAPER NUMBER

2851

DATE MAILED: 10/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/856,384

Applicant(s)

MOTEGI ET AL.

Examiner

Peter B. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 12-17, 20, 21, 24, 25 and 38-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-17, 20, 21, 24, 25 and 38-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Sept. 10, 2004 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-9, 12-17, 24 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishi (6,335,787).

Nishi discloses an exposure apparatus comprising an optical apparatus with optical elements of illumination optical system and projection optical system, which projects pattern formed on the mask onto a substrate, in a chamber (Fig. 2 and Fig. 9) which accommodates at least one barrel (113), a light source which emits an excimer laser (2), a first purge mechanism (117) for providing an inert gas or nitrogen and a second purge mechanism (116) for providing oxygen, an operation condition detecting mechanism and a control apparatus for connecting the first or second purge mechanism based on the detection result (col. 25, line 27 – col. 26, line 41). Nishi also discloses cleaning apparatus arranged to remove impurities from the gases (col. 26, lines 1-23). Nishi also disclose an exhaust apparatus connected to the barrel and the operation condition detecting mechanism includes an exhaust monitor provided with the exhaust apparatus to detect the exhaust volume (col. 27, line 61 – col. 28, line 48). It is inherent in Nishi's teaching that the invention of Nishi would include an operation condition detecting mechanism and a holder that stores the gases supplied to the apparatus because in order for the air conditioner and the gas volume controller to provide the appropriate environment as taught by Nishi in col. 26, an operation condition detecting mechanism is required.

Claims 1-5, 9, 13-17, 20, 21, 24 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Magome et al. (Magome) (2002/0145711).

Magome discloses an exposure apparatus comprising an optical apparatus with optical elements of illumination optical system and projection optical system, which projects pattern

formed on the mask onto a substrate, in a chamber (Fig. 1, ref. 7) accommodating a barrel (PL), a light source which emits an excimer laser (3), a first purge mechanism (46, 47) for providing one type of gas and a second purge mechanism (84, 85) for providing a second type of gas, an operation condition detecting mechanism (para 0077, 0101) and a control apparatus for connecting the first or second purge mechanism based on the detection result (para 0099-0101). Magome also discloses cleaning apparatus arranged to remove impurities from the gases (para 0096). Magome also disclose an exhaust apparatus connected to the barrel and the operation condition detecting mechanism includes an exhaust monitor provided with the exhaust apparatus to detect the exhaust volume (para 0117-0119, and 0141). Magome also teaches holder (84) for holding the second gas.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 38-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishi in view of Hasegawa et al. (Hasegawa) (EP 0676672).

Nishi discloses the claimed invention as discussed above; however, Nishi does not disclose an exhaust monitor which detects the exhaust volume and the control apparatus controlling the purge mechanism to supply the appropriate gas depending on the detection results. Hasegawa discloses in Fig. 3, exhaust monitor (110) to monitor the concentration of gas

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and control the appropriate at supply gas. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide an exhaust monitor to the invention of Nishi in order to provide a precise and quick control of the gas as taught by Hasegawa in col. 8, lines 15-30.

Claims 38-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magome et al. (Magome) in view of Hasegawa et al. (Hasegawa) (EP 0676672).

Magome discloses the claimed invention as discussed above; however, Magome does not disclose an exhaust monitor which detects the exhaust volume and the control apparatus controlling the purge mechanism to supply the appropriate gas depending on the detection results. Hasegawa discloses in Fig. 3, exhaust monitor (110) to monitor the concentration of gas and control the appropriate at supply gas. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide an exhaust monitor to the invention of Magome in order to provide a precise and quick control of the gas as taught by Hasegawa in col. 8, lines 15-30.

Response to Arguments

Applicant argues that cited references do not teach changing of a connection between the purge mechanism and the barrel or selectively communicating with a first or second purge mechanism. However, as indicated above Nishi and Magome both teach controlling the supply of gases depending on the results of operation condition detecting mechanism. Nishi discloses gas change over device 120A for selective communication. Magome discloses in para 0101-

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0103, closing and opening of the valve allowing for selective communicating with a first or second purge mechanism.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter B. Kim whose telephone number is (571) 272-2120. The examiner can normally be reached on 8:30 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Peter B. Kim
Primary Examiner
Art Unit 2851

October 22, 2004